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EXPRESSION OF sICAM-1 IN URINE AND SERUM OF BLADDER CANCER PATIENTS: A USEFUL MARKER?

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The intercellular adhesion molecule-1 (ICAM-1; CD 54) participates in tumor defense mechanism. Due to recent studies that found ICAM-1 expressed on the surface of human transitional carcinoma cell lines and on tumor tissue, the present study aimed to investigate the appearance of the soluble molecule (sICAM-1) in human urine and serum from patients with bladder carcinoma (n=34). Analysis included urine analysis, blood chemistry, microbiology, CEA- and CA-19-9 level, tumor histology and stage, in comparison to sICAM-1 concentrations obtained by an ELISA. In addition the influence of rhu-IFN-α and rhu-IFN-τ (300 IU/ml, 72 hrs) on sICAM-1 level in supernatants of bladder cancer cell lines (RT 112, RT 112-CP, HT 1376, HT 1376-Eto, J82, 647 V) was evaluated. Enhanced sICAM-1 level in urine reflected an increase in tumor invasion and dedifferentiaton more specific than in serum. Significant differences were found between superficial (pTa) and invasive (>pTa) carcinoma. Moreover sICAM-1 was constitutively shed by bladder tumor cell lines (with an increased expression in case of drug resistance) and could be stimulated with cytokines. In conclusion sICAM-1 can be detected by a simple and reproducible assay. It is suggested as a tumor marker for invasion and biology of bladder carcinoma but not for screening of superficial tumors. Being involved either in immunosurveillance or defense of tumor cells the analysis of sICAM-1 may recommend itself as a prognostic factor for patients with bladder carcinoma or as marker for the response and efficacy of intravesical immunotherapy (IFN, BCG).

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NATURAL KILLER ACTIVITY (NKA) IN PATIENTS WITH HEAD AND NECK SQUAMOUS CELL CARCINOMA (HNSCC) TREATED WITH .CISPLATIN (P) /5-FLUOROURACIL (F) +/- INTERFERON 2b (INT)

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42 patients (pts) with advanced (30 Stage III and 12 - IV) HNSCC were entered in a study of neoadjuvant chemotherapy (NCT) using P 100 mg/m2 on d 1, followed by a push F at 800 mg/m2 on d 1-5 (group A - 27 pts), and an infusion of INT at 3 MU sc on d 1-5 (group B - 15 pts); every 3-4 wk. The overall response rates of NCT were 62% and 56% for group A and B. However, toxicity was more common in pts treated with INT. NKA against K562 targets decreased during NCT in both groups, but increased more effective in group B after NCT: before NCT - 31.2±6.4% and 30.6±7.3%; on d 2-3 of 2nd cycle NCT - 24.2±5.0% and 20.8±6.7%; 3 weeks after finish NCT - 28.2±7.2% and 33.6±6.9%. Conclusions: INT a) did not change overall response of NCT; b) modulated NKA; c)but increased NCT' toxicity.

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Preoperative application of interferon inducer on patients with rectal cancer.

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It is known that surgery may induce immunosuppression. The suppression of host defence in the postoperative period might promote the growth of eventual micrometastases in cancer patients . No medical therapy has been proven to neutrolize the surgery-induced immunosuppression . The study was started to evaluate the influence of a preoperative therapy with ds-RNA on surgery-induced immune changes. 39 rectal cancer patients were studied - patients were treated intramuscular with ds-RNA at a dose of 5 mg/m2 twice weekly for two weeks before surgery. After preoperative treatment patients underwent radical or palliative surgery within 24 hrs from ds-RNA interruption . For immune detections , venous blood samples were drawn before and 7 and 14 days after surgery. Results of immune detection were compared with a control group of 43 rectal cancer patients surgically treatment with ds-RNA. Lymphocytes, T-lymphocytes , T-helpers/inducers were decreased after surgery in controls. Phagocytes activity and interferon production were decreased too. On the contrary, no patients treated preoperatively with ds-RNA showed any important decreases of lymphocytes, T-lymphocytes, T-helpers/inducers and phagocytes activity, interferon production observed in the postoperative period was significantly higher in serum of patients treated with ds-RNA than in controls.

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URINARY DETECTION OF THE FORMATION OF CYTEINYL-LEUKOTRIENES IN HUMAN BRAIN TUMOR TISSUES

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We have recently demonstrated that human brain tissue has the capacity to synthesize rather large amounts of cysteinyl-leukotrienes (LT) in vitro. In addition, we have shown that the biosynthetic capacity for cysteinyl-LT by human astrocytoma tissue slices incubated in vitro in the presence of ionophore A 23187 (10μM) correlates with the malignancy grade as assessed by histopathological examination (J Neurochem 54 1990 2091). By combined reverse phase HPLC and radioimmunoassay we have now found that patients with malignant astrocytomas showed a significantly elevated urinary excretion of LTE_4 which corrected for the tumor volume correlates ($P<0.01$) with the spontaneous cysteinyl-LT formation in vitro by slices from surgical specimens of the very same patients. Surgical tumor removal was followed by a drop of the urinary LTE_4 excretion to control values. In some cases with tumor recidives urinary LTE_4 excretion rose again. In patients with astrocytoma grade IV the urinary LTE_4 excretion corrected for the tumor volume was significantly higher ($P<0.05$) than in patients with astrocytoma III. Interestingly, in patients with astrocytomas grade III a significant correlation could be established between the urinary LTE_4 excretion corrected for the tumor volume and the peritumoral edema indicating that cysteinyl-LT might possibly be involved in the pathogenesis of the perifocal edema. Our results suggest that cysteinyl-LT might be of pathophysiological significance in human astrocytomas.